Lessons from New Zealand's introduction of pictorial health warnings on tobacco packaging

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Abstract While international evidence suggests that featuring pictorial health warnings on tobacco packaging is an effective tobacco control intervention, the process used to introduce these new warnings has not been well documented. We examined relevant documents and interviewed officials responsible for this process in New Zealand. We found that, despite tobacco companies' opposition to pictorial health warnings and the resource constraints facing health authorities, the implementation process was generally robust and successful. Potential lessons for other countries planning to introduce or refresh existing pictorial health warnings include: (i) strengthening the link between image research and policy; (ii) requiring frequent image development and refreshment; (iii) using larger pictures (e.g. 80% of the front of the packet); (iv) developing themes that recognize concerns held by different smoker sub-groups; and (v) running integrated mass media campaigns when the warnings are introduced. All countries could also support moves by the World Health Organization Framework Convention on Tobacco Control's Secretariat to develop an international bank of copyright-free warnings.

Une traduction en français de ce résumé figure à la fin de l'article. Al final del artículo se facilita una traducción al español. الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.

Introduction

Since the World Health Organization Framework Convention for Tobacco Control (FCTC) (Article 11) introduced minimum criteria on health warning labels for tobacco products,[1] the evidence for pictorial health warnings has strengthened.[2–4] In our own region, findings from Australia[2,5,6] and New Zealand[7,8] indicate that pictorial health warnings have improved knowledge of smoking harms and cessation-related behaviours. These health warnings are a highly cost-effective intervention for governments, since the tobacco industry pays production costs and tax payers fund only policy development work and associated costs. Given that some countries have yet to introduce pictorial health warnings or are rotating the imagery and messages already included, lessons from their introduction could inform future initiatives.

We examine the introduction of New Zealand's regulations (under the Smoke-free Environments Regulations 1999) requiring tobacco companies to feature pictorial health warnings on product packaging from 2008. We obtained online documents, including research reports and the final Cabinet paper[9] recommending pictorial health warnings (obtained under the Official Information Act 1982). Two officials involved in the process were interviewed and discussions were held with staff from cessation support agency, Quitline. We discuss the guidance received from other countries, selection of the images, policy implementation, responses by the tobacco industry and monitoring. We conclude by analysing process guidelines that other countries may wish to consider.

International advice

Australia developed very prescriptive guidelines for pictorial warnings that outlined in detail such attributes as the image size, orientation, font and border. This approach proved expensive to develop and it was difficult to cover all packaging options definitively, so New Zealand policy-makers instead issued more general guidelines. For example, rather than outlining specific image requirements, the New Zealand regulations prohibited various practices that could affect the warning, such as image stretching, and outlined cropping limits.

New Zealand officials obtained useful guidance from their Australian counterparts and officials from other jurisdictions about the introduction and implementation of pictorial health warnings. For example, New Zealand adopted advice to define an introduction date and six-month phase-in period, at the end of which time all tobacco packaging was required to feature pictorial health warnings (February 2008 and August 2008, respectively). This eliminated opportunities to stockpile and use text-only packages well into the future.

A trade agreement between New Zealand and Australia (the Trans-Tasman Mutual Recognition Agreement, TTMRA) influenced the size and content of the warnings used in New Zealand. Specifically, New Zealand opted for a 30% front-of-pack (and 90% of the back) pictorial warning, mirroring Australia's coverage, instead of a 50:50 warning display, even though research suggests this has greater impact.[10] Fig. 1 contains an example of the pictorial health warnings implemented.

Although larger images were considered, these were regarded as difficult to introduce at the top of packs as the pack hinge would have disrupted the image. Locating images at the bottom of packs risked obfuscation by the display containers at retail outlets.

However, smokers' normal practice of placing packs front-up in social settings means they are likely to be exposed only to the 30% front-of-pack warning, thus this decision resulted in weaker opportunities to promote exposure to pictorial warnings.[12] Given that Uruguay has recently regulated for pictorial health warnings that cover 80% of the pack front,[13] FCTC signatories may wish to discuss endorsing larger pictorial warnings to

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promote warning salience. The outcome of the tobacco industry's legal challenges to Uruguay's regulations (in mid-2010) will also inform these discussions.

Image sources

Although New Zealand regulators explored commercial image sources, they ultimately obtained licences to use copyrighted images developed by Australia, Canada and the European Union. While this measure achieved cost savings, obtaining approval nevertheless took considerable administrative time and incurred other costs. Furthermore, in some cases, the copyright holders required their images to include their ownership details, a usage condition that increased the clutter affecting some warnings.

External ownership of the warning images also limited New Zealand's ability to supply warnings to other countries as the licences did not allow transfer of material and specified the purposes for which the images could be used. Use of actors in some international images presented problems due to image copyright, and the need to pay royalty costs was, and remains, a barrier to the introduction of these warnings.

Images sourced from other countries had subjects who were not from the ethnic groups that have the highest smoking prevalence in New Zealand and copyright restrictions prevented image modifications. Although some images were developed domestically (e.g. a Quitline image featuring a Māori caller), these were not considered sufficiently "fear arousing" and so were not used in the final set of warnings. Only one nationally-developed image (of a pregnant woman) was used. This emphasis on high fear arousal arguably reduced the number of messages communicated and the opportunities to reach more diverse audiences.

An international bank of images that all countries could access and modify to suit their own populations would reduce costs, expedite the introduction of pictorial health warnings and promote more rapid compliance with the FCTC among signatories. While fear-evoking images have high immediate impact, development of a diverse image set could enable more effective communication with different smoker segments. For example, there is some evidence that younger smokers do not see medical images of diseased organs as salient. In this case, social imagery may have stronger effects

on their behaviour.[14,15] As well as sharing images, an international database could provide access to evaluation research, which could expedite implementation, at least between countries with similar cultural contexts.

Image research

Commissioned literature reviews and qualitative research helped develop the case for pictorial health warnings, even though the testing undertaken was not extensive. The Ministry of Health used a three-stage research process to examine the effect of pictorial and text warnings on smoking behaviours. An initial study, conducted in May 2004, surveyed current and former smokers and non-smokers living in a smoking household ($n = 100$) and explored responses to 24 different warning messages. The researchers concluded that visual images were a "crucial element" of effective warnings.[16]

Findings from this work informed a series of focus groups, undertaken in August 2004, which identified presentation and format guidelines.[17] Participants included parents, smokers, Māori and young women, all of whom saw the same warning message presented in four different ways. This study confirmed that pictorial warnings were likely to have more impact than text-only warnings, reinforced the importance of front-of-pack positions, and identified yellow and black as the most attention-getting colours to use in

warnings. Although this study involved two Māori groups, the report neither tested warnings of specific relevance to Māori nor provided a detailed analysis by ethnic group membership.

The final research phase took place in late 2004 and tested attributes that influence message effectiveness and smoking behaviour using a set of 20 pictorial health warnings ($n = 100$ respondents).[18] Messages with the highest impact ("smoking can give you mouth and throat cancer"; "smoking while pregnant starves your baby" and "smoking is addictive") were regarded as confrontational and unsettling. Those with the highest probability of changing behaviour typically had strong health themes. However, because the sample size was small, the results were indicative rather than conclusive and analyses by subsample such as ethnicity provided limited insights. Nevertheless, the results were sufficient to demonstrate that New Zealanders' responses to these warnings were consistent with findings reported from other countries.

Of the 14 images selected for use in New Zealand, four were based on messages tested in the final research phase and a further five were modified versions of the messages tested. However, the messages and images that performed most strongly in the research were not always used in the campaign; images were more likely to be selected for their perceived "fear arousal".

The New Zealand research provided limited guidance, largely because the sample sizes were too small to support robust analyses. However, where pictorial health warnings have been introduced, impact evaluations may provide robust evidence that supports policy development in countries yet to implement these warnings. To support the wider dissemination of this research, any future image database should also include results from evaluations. Making these available will promote best practice, reduce the need for domestic research where cultural norms are similar, and save both time and money.

Implementation

Research from Australia confirmed the advantages of using mass media campaigns to support the introduction of pictorial health warnings. New Zealand responded by consulting with two agencies dealing with social change or cessation support: the Health Sponsorship Council and Quitline. This consultation resulted in a coordinated communications approach that drew on parallel Australian campaigns.

The use of actors in the Australian advertisements was criticized as lacking authenticity, so the New Zealand campaign used actual people harmed by smoking. The campaign was unscripted and the resulting advertisements elicited powerful emotional responses and attracted considerable unpaid media coverage. This approach avoided problems with royalty arrangements for actors, as participants in the New Zealand campaign had compelling non-commercial reasons for communicating their messages.

As in Australia, the primary objective of the campaign was to stimulate calls to the national smoking cessation service, Quitline; secondary objectives included supporting the policy introduction and promoting acceptance of the new packs. The Quitline modelled likely increases in demand using data from Victoria, Australia, and obtained funding to employ a further four full-time staff equivalents to cope with the projected call numbers. Data indicate that calls to the New Zealand Quitline increased,[7] a finding that parallels the Australian experience[5] (and elsewhere for new text-warnings).[19,20]

Australian regulators received calls querying the veracity of the images. New Zealand anticipated this response by preparing fact sheets about the rela-tionship between smoking and disease outcomes featured in the warnings. These were placed on the Ministry of Health Internet site and call-centre staff directed complainants to these resources.

The successful implementation highlights the importance of careful co-ordination across multiple agencies, and the value of drawing on other countries' experiences to anticipate potentially adverse responses.

Potential legal challenges

Freedom of expression

Because the tobacco industry uses litigation to impede tobacco control policy development, regulators need to pay careful attention to national laws and trade agreements that may give rise to legal challenges.[21,22] The New Zealand Cabinet paper[9] recommending the introduction of pictorial health warnings evaluated and rejected claims made by tobacco companies, and could provide useful guidance to other countries.

Tobacco companies claimed that pictorial health warnings would prevent them from using their trademarks and constitute an unreasonable encumbrance of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement. However, the Ministry of Health officials concluded that brand could still be differentiated on the basis of their packaging and found that, even if the warnings constituted an encumbrance, TRIPS allowed for measures "necessary to protect public health".

Tobacco companies used the New Zealand Bill of Rights Act 1990 to argue that requirements to display pictorial health warnings constituted a breach of section 14 and their right to free speech. Given that many countries have statutes that protect free speech, this is a potentially important challenge to consider. In New Zealand, the relevant Act allows limitations on freedom of expression where these are required to meet an important objective, and are proportionate. The Ministry of Health undertook extensive consultation with three other government ministries and concluded that these criteria had been met.

Trade barriers

Tobacco companies submitted that pictorial health warnings would breach the proportionality criterion of the World Trade Organization Agreement on Technical Barriers to Trade. However, the Ministry of Health found that the warnings were proportionate and concluded that the large number of signatories to the FCTC implied that the standard of 50% or more of the principal display areas (Article 11) was not unnecessarily restrictive.

New Zealand's "single market" trade agreement with Australia requires new policies to be reviewed against the TT-MRA. Under the TTMRA, a good that is legally able to be sold in Australia is generally able to be sold in New Zealand without the need to meet New Zealand regulations relating to the sale of that good, and vice versa. As 80% of tobacco products sold in New Zealand are manufactured in Australia, policy-makers were concerned this agreement would lead to importation of products featuring Australian labelling and Quitline information (and would not include Māori language warnings, which are a standard feature of the older text warnings, the new pictorial health warnings or New Zealand Quitline details). Although this did not appear likely, officials regarded it as a reason for following Australia's approach to warning sizes. Specifically, they believed deviations from this could lead tobacco companies to invoke the TTRMA and supply products featuring Australian warnings to New Zealand. The alternative would be for New Zealand to seek to exclude tobacco products from the TTMRA, an approach less favoured by government as it could be seen to discourage free trade between the two countries.

Monitoring

The Ministry of Health did not introduce formal monitoring provisions as these were considered part of the normal enforcement procedures, nor did the final regulations specify any monitoring of industry processes around printing pictorial health warnings. However, the Ministry of Health identified minor formatting problems when investigating a complaint. Research examining discarded cigarette packs has recently suggested that tobacco companies may have printed disproportionately more of the warnings that had less impact.[23]

The regulations require that seven of the 14 pictorial health warnings are equally featured in each 12-month period and a yearly rotation cycle is in place to reduce wear-out (with a four-month tran-

Table 1. **Lessons from New Zealand's experience introducing pictorial health warnings on tobacco packaging[11]**

Decision stage	Comments
International advice	New Zealand's trade and regulatory relationship with Australia, in particular, provided policy development, implementation and management guidance. Countries yet to introduce pictorial health warnings could benefit from discussing other countries and trade partners' experiences. The World Health Organization could also maintain an updated database on policy development, implementation and management.
Image sourcing	Creating images is expensive, yet accessing those used in other countries proved time-consuming, although it ultimately reduced costs. Developing an international image and research bank (underway via the FCTC Secretariat) could promote best practice, provide access to up-to-date evaluations, reduce visual clutter from the "attribution" label in the pictorial health warnings and simplify their introduction.
Image research	To strengthen the relationship between research and policy decisions, robust samples are required to pre-test warning messages and images. Research should also examine the optimal size and location of Quitline information. Findings from this work could help establish international best practice and should be made available via the FCTC site.
Implementation	Strong co-ordination between health agencies provided access to specialist communication skills and anticipated Quitline demand. Setting a specific deadline after which text warnings could no longer appear clarified the implementation. The Ministry of Health's consultation with 12 other government agencies effectively addressed possible challenges from tobacco companies.
Legal challenges	It is critical to consider how each country's constitution and trade agreements could lead to legal challenges, particularly those in relation to property rights, "freedom of information" and trade barrier claims. The FCTC Secretariat could provide a repository of legal material and access to advice to assist countries facing these questions.
Monitoring	Monitoring could ensure images are distributed evenly and would create a process to oversee more regular image refreshment.

FCTC, Framework Convention on Tobacco Control.

Table 2. **Timeline of events relevant to New Zealand's introduction of pictorial health warnings for tobacco products**

Date	Activity
21 May 2003	FCTC unanimously adopted by the World Health Organization's 192 Member States.
23 February 2004	New Zealand Ministry of Health commences consultation over pictorial health warnings.
27 February 2004	New Zealand ratifies the FCTC.
July 2004	Ministry of Health issues *Review of the Smoke-free Environments Regulations 1999 – consultation document.*
31 January 2005	Ministry of Health issues a report *Summary of Submissions on the Review of the Smoke-free Environments Regulations 1999.*
May 2006	Ministry of Health issues a report *Review of the Smoke-free Environments Regulations 1999: Health Warnings on Tobacco Products – consultation document* (2006).
31 July 2006	Ministry of Health issues *Smoke-free Environments Regulations Review: Health Warnings on Tobacco Packaging. Final report.*
30 October 2006	The Government approves drafting of regulations requiring pictorial health warnings on tobacco products sold in New Zealand.
26 February 2007	New labelling regulations receive assent.
28 February 2008	All tobacco products manufactured for sale in New Zealand must feature pictorial health warnings.
June 2008	A mass media campaign that is thematically linked to one of the new pictorial health warnings commences.
28 August 2008	All tobacco products sold in New Zealand must feature pictorial health warnings according to the law.
27 February 2009	First warning rotation commences with a four-month phase-in.
April 2009	A mass media campaign that is thematically linked to one of the new set of pictorial health warnings commences.

FCTC, Framework Convention on Tobacco Control.

sition period). There are no provisions for routinely refreshing the warnings beyond rotating the two sets of seven warnings. Evidence from Canada suggests smokers' responses to pictorial health warnings declined slightly between 2002 to 2006.[2] Discussions with smokers also suggest that, while these warnings have a strong initial impact, smokers may become accustomed to them.[24] These findings suggest new messages should be regularly introduced to maintain warning salience and incorporate new research evidence.

Although some officers were employed by the health system to monitor the introduction of pictorial health warnings and investigate complaints, a systematic regulator-driven monitoring process would arguably have been more rigorous. Other countries may wish to research such aspects as monitoring image use and image refreshment.

Recommendations

Given tobacco companies' opposition to pictorial health warnings[25] and the resource constraints facing the New Zealand Ministry of Health, the implementation process was generally robust and successful.

Table 1 summarizes decisions taken as pictorial health warnings were implemented. Table 2 outlines the policy timeline. Other countries planning to introduce or refresh existing pictorial health warnings could learn from this experience. In particular, they should consider strengthening the link between image research and policy, requiring frequent image development and refreshment, using larger pictorial warnings (e.g. 80% of the front of the packet), developing themes that recognize concerns held by different smoker sub-groups, and running mass media campaigns when pictorial health warnings are introduced.

All countries could also support moves by the World Health Organization FCTC's Secretariat to develop an international bank of copyright-free warnings (potentially building on existing resources).[13,26,27] The FCTC Secretariat could also provide a repository of policies and support materials used to implement the warnings and advice on dealing with legal challenges. These measures will disseminate best-practice measures, support the introduction and refinement of pictorial health warnings, promote smoking cessation and deter initiation. ■

ملخص

الدروس المستفادة من إدخال نيوزيلندا للتحذيرات الصحية المصورة على علب السجائر

لم يتم جيداً توثيق عملية إدخال التحذيرات الجديدة المصورة على علب السجائر على الرغم من البيّنات العالمية التي تدل على أن استخدام الرسائل التحذيرية المصورة على علب السجائر هي مداخلة فعالة لمكافحة التبغ. ولقد درس الباحثون الوثائق المتعلقة بهذا الأمر وإجروا مقابلات مع المسؤولين عن هذه العملية في نيوزيلندا، ووجدوا أنه على الرغم من معارضة الشركات المصنعة للتبغ للتحذيرات الصحية المصورة، والموارد الشحيحة التي تواجه السلطات الصحية، فإن تنفيذ هذه العملية، بصفة عامة، كان قوياً وناجحاً.

أما الدروس التي يمكن أن تفيد سائر البلدان التي تنوي إدخال أو تحديث التحذيرات الصحية المصورة فتتضمن ما يلي: (أ) تقوية الصلة بين البحوث المتعلقة بالصور والسياسات، (ب) الحاجة إلى التطوير المتكرر للصور وتحديثها، (ج) استخدام صور أكبر حجماً (80% من واجهة علبة السجائر مثلا)، (د) ابتكار شعارات تتطرق إلى اهتمامات المجموعات الفرعية المختلفة للمدخنين، (ه) تنظيم حملة إعلامية جموعية متكاملة عند إدخال هذه التحذيرات. ويمكن أن تقوم جميع البلدان عن طريق أمانة اتفاقية منظمة الصحة العالمية الإطارية لمكافحة التبغ، بدعم التوجهات الخاصة بإنشاء بنك دولي للتحذيرات التي لا تتمتع بحقوق الملكية.

Resumé

Leçons tirées de l'introduction par la Nouvelle-Zélande d'avertissements sanitaires visuels sur les paquets de cigarettes

Alors que les témoignages internationaux suggèrent que la présentation d'avertissements sanitaires illustrés sur les paquets de cigarettes représente une mesure efficace de la lutte anti-tabac, le processus utilisé pour introduire ces nouveaux avertissements n'a pas été assez documenté. Nous avons examiné les documents pertinents et interrogé les responsables de ce processus en Nouvelle-Zélande. Nous avons constaté que, malgré l'opposition des cigarettiers concernant les avertissements sanitaires illustrés sur les paquets de cigarettes et les contraintes financières auxquelles sont confrontées les autorités sanitaires, le processus de mise en œuvre est d'une manière générale solide et réussi. Les éventuelles leçons que peuvent tirer les autres pays désireux d'introduire ou d'actualiser ces avertissements sanitaires imagés comprennent: (i) le renforcement du lien entre la recherche d'image et la politique; (ii) la nécessité de développer et d'actualiser régulièrement l'image; (iii) l'utilisation d'images de plus grande taille (par exemple 80% de la face avant du paquet); (iv) le développement de thèmes qui prennent en compte les préoccupations des différents sous-groupes de fumeurs; et (v) le lancement de campagnes médiatiques intégrées lors de l'introduction des avertissements. Tous les pays pourraient également soutenir les mesures du Secrétariat de la Convention-cadre pour la lutte antitabac de l'OMS en matière de développement d'une banque internationale d'avertissements libres de droits.

Resumen

Lecciones aprendidas tras la introducción de imágenes de advertencia sanitaria en los paquetes de cigarrillos en Nueva Zelandia

Si bien los datos a nivel internacional sugieren que la introducción de imágenes de advertencia sanitaria en los paquetes de cigarrillos es una intervención eficaz en el control del tabaquismo, el proceso utilizado para introducir estas nuevas advertencias aún no está bien documentado. Hemos revisado los documentos pertinentes y hemos entrevistado a los funcionarios estatales responsables de este procedimiento llevado a cabo en Nueva Zelandia. Hemos podido observar que a pesar de la oposición de las tabacaleras a las imágenes de advertencia sanitaria y de los escasos recursos de las autoridades de salud, el resultado fue que, en términos generales, la implantación del procedimiento fue sólida y tuvo un resultado positivo. Las posibles lecciones que pueden ser útiles a otros países que buscan introducir o cambiar las imágenes de advertencia sanitaria en

uso abarcan: (a) el fortalecimiento del vínculo entre la investigación y las políticas en torno al uso de imágenes; (b) la necesidad de crear y actualizar las imágenes a menudo; (c) la utilización de imágenes más grandes (por ej., que cubran el 80% del frente del paquete); (d) el desarrollo de temas que identifiquen las preocupaciones de los distintos subgrupos de fumadores; y (e) la realización de campañas publicitarias integradas en los medios cuando se introduzcan las advertencias. Además, todos los países podrían apoyar las gestiones de la Secretaría del Convenio Marco de la Organización Mundial de Salud para el control del Tabaco con el fin de diseñar un banco internacional de imágenes de advertencia de dominio público.

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